

AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims in the application:

1-15. (Cancelled)

16. (Currently amended) An intramedullary nail suitable for insertion in a fractured elongate bone, comprising:

a stem extending between a proximal end and a distal end,

a plurality of shape-memory elements which at least include a shape-memory material, and

a plurality of seats formed in the stem for housing said shape-memory elements,

wherein said shape-memory elements are suitable to assume a first rest configuration in which said shape-memory elements are arranged inside the respective seats and a second use configuration in which said shape-memory elements project from the respective seats,

wherein the nail includes inserts, structurally independent from the stem and comprising at least one of said shape-memory elements, each of said inserts being suitable to be arranged in a corresponding seat, and

wherein each insert has substantially a fork-like shape and is made of a plurality of metallic foils stacked onto each other and consisting of shape-memory material, the metallic foils being held together by means of a pair of blocking pins inserted transversally to the metallic foils for ensuring a stable assembly.

17-18. (Cancelled)

19. (Previously presented) An intramedullary nail suitable for insertion in a fractured elongate bone, comprising:

a stem extending between a proximal end and a distal end,

a plurality of shape-memory elements which are made of at least a shape-memory material,

and

a plurality of seats formed in the stem for housing said shape-memory elements, said shape-memory elements are suitable to assume a first configuration of rest in which said shape-memory elements are arranged inside the respective seats and a second configuration of use in which said shape-memory elements project from the respective seats,

wherein said shape-memory elements are structurally independent from the stem,

wherein the nail comprises a tubular jacket for sheathing the stem, the tubular jacket having the function of retaining the shape-memory elements in the first configuration of rest, the jacket comprising a side wall and a plurality of transversal elongate holes made on the side wall, wherein the jacket and the stem can be shifted with respect to each other along a longitudinal axis of the stem from a first operative position in which the side wall of the jacket retains the shape-memory elements in the first configuration of rest, and a second operative position in which the transversal holes of the jacket are aligned with the seats of the stem, so as to allow the arrangement of the shape-memory elements projecting from the respective seats, and

wherein a control screw, suitable to be rigidly connected to a head portion of the stem, causes an axial shift of the stem with respect to the jacket, when the control screw is rotated around its own axis.

20-23. (Cancelled)

24. (Previously presented) The intramedullary nail according to claim 19, wherein the nail comprises an internally hollow tube suitable to be rigidly connected to a head portion of the jacket and in which the control screw is housed within the hollow tube with clearance.

25-37. (Cancelled)

38. (Previously presented) The intramedullary nail according to claim 24, wherein the internally hollow tube is inserted in a bearing sleeve, said bearing sleeve being configured to maintain the jacket axially firm during the shift of the stem.

39. (Previously presented) The intramedullary nail according to claim 38, wherein a cylindrical body is welded on the head portion of the jacket, said cylindrical body having an internal threading onto which a corresponding threading of the internally hollow tube is screwed, and wherein the cylindrical body is provided with a pair of recesses configured to receive corresponding teeth of the bearing sleeve.

40. (Previously presented) The intramedullary nail according to claim 19, wherein the head portion of the stem is provided with a threaded portion suitable to engage a corresponding threaded portion of the control screw.